

# Hearing on “Assessing State and Local Regulations to Reduce Dental Mercury Emissions”

## Testimony to the US House Committee on Oversight and Government Reform Subcommittee on Domestic Policy

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Washington, DC  
July 8, 2008

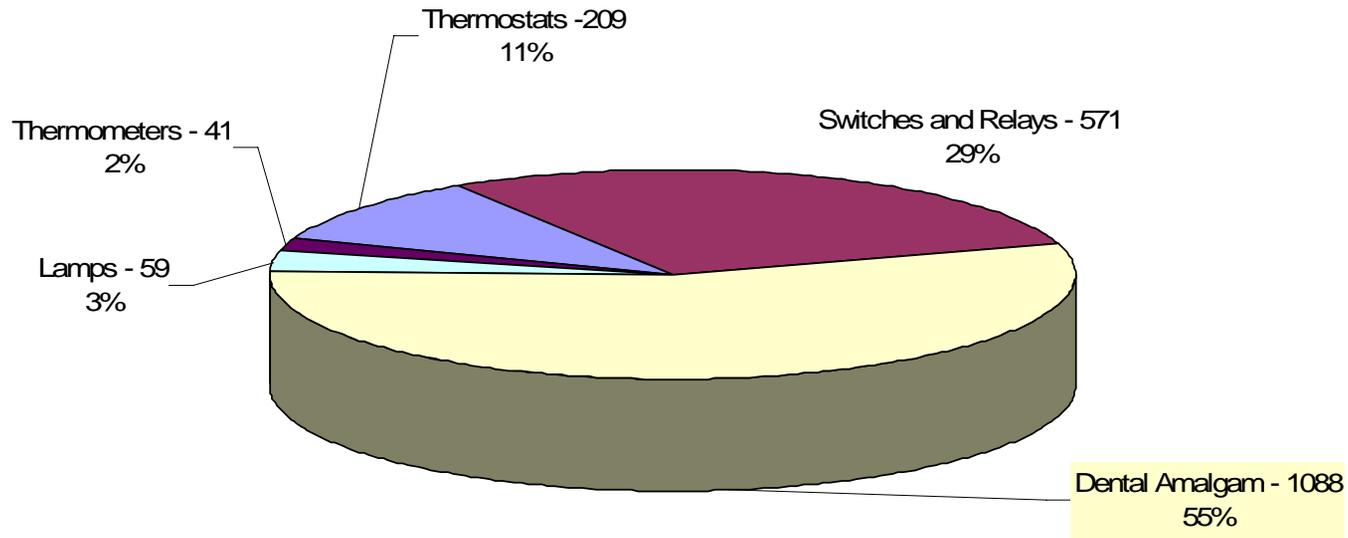
**Mercury  
Policy Project**

# Presentation Overview

- Background: 1,000+ Tons Mercury Tooth Fillings Polluting Environment; Mercury Use Continuing
- 9 States Require Dentists to Have Amalgam Separators to Reduce Mercury into Wastewater
- Voluntary Efforts Not Effective at Convincing Dentists to Install Separators
- ADA/State Associations Reportedly Blocking State, Local Amalgam Separator Initiatives
- Summary: Amalgam Separators Most Cost Effective at Controlling Dental Mercury Pollution

# Amalgam Comprises 55% of Mercury In Use in the US, According to EPA (2004)

Total = 1968 tons



Source: EPA 2004 International Mercury Market Study and the Role and Impact of US Environmental Policy.

# Dental Mercury in Wastewater

- Dental Hg identified as "by far" the greatest Hg contributor to wastewater
- Over 3 times more mercury than next largest source
- Accounts, on average, for 50% of the load

| <b>City</b>             | <b>Mercury load from dental offices</b> |
|-------------------------|---|
| Duluth, Minnesota       | 36%                                     |
| Seattle, Washington     | 40-60%                                  |
| Palo Alto, California   | 83%                                     |
| Greater Boston Area, MA | 13-76%                                  |

# US Dental Mercury Use DID NOT Diminish from 2001 to 2004

- Northeast Waste Mgt Officials Association's Interstate Mercury Education and Reduction Clearinghouse just released the 2004 data on mercury uses from the amalgam manufacturers
- U.S. dentists still using 30 tons of mercury annually in 2004, just as they were in 2001
- This is significant because, contrary to what we have heard from the dental sector, their mercury pollution will continue unabated without controls

## Total Amount of Mercury Sold in Fabricated & Formulated Products U.S. For Calendar Years 2001 & 2004

| Products/Components                     | Total Mercury (pounds)       |                              | Number of Total Manufacturers Reporting |            |
|---|------------------------------|------------------------------|---|------------|
|   | 2001                         | 2004                         | 2001                                    | 2004       |
| Switches & Relays                       | 119,660                      | 102,162                      | 53                                      | 46 + 3 nr* |
| Dental Amalgam                          | 61,537                       | 60,781                       | 5                                       | 5          |
| Thermostats                             | 30,971                       | 29,943                       | 9                                       | 8 + 1 nr   |
| Lamps                                   | 21,438                       | 20,118                       | 177                                     | 185 + 8 nr |
| Miscellaneous                           | 8,505                        | 4,807                        | 12                                      | 10 + 2 nr  |
| Batteries                               | 5,914                        | 5,122                        | 40                                      | 41         |
| Measuring Devices:                      |                              |                              |   |            |
| Sphygmomanometers                       | 4,305                        | 2,219                        | 2                                       | 2          |
| Thermometers                            | 5,347                        | 4,524                        | 13                                      | 8 + 4 nr   |
| Manometers                              | 1,936                        | 2,545                        | 4                                       | 4          |
| Barometers                              | 353                          | 234                          | 1                                       | 1          |
| Psychrometers/Other Measuring Equipment | 4                            | 3                            | 3                                       | 3          |
| Chemicals & Solutions                   | 2,060                        | 1,810                        | 20                                      | 20 + 1 nr  |
| <b>Total</b>                            | <b>262,030</b><br>(131 tons) | <b>234,268</b><br>(117 tons) | <b>339</b>                              | <b>352</b> |

# State Mandates for Amalgam Separators

- Nine states have opted for a mandatory requirement for amalgam separators, either through law or regulation.
- Why? Voluntary programs aren't effective at convincing dentists to install separators
- For example, data from the Boston area shows a 48% reduction in mercury concentration in sludge as amalgam separator use increased from less than 20% to over 80% due to mandates.
- You will hear many other examples like this today

# ADA/State Dental Associations Reportedly Blocking Amalgam Separator Initiatives

- ADA reportedly “trains trainers” to support BMPs, oppose amalgam separator initiatives
- ADA/state dental associations appear to have blocked amalgam separator initiatives in California, Wyoming, Michigan, Ohio, Montana & likely elsewhere
- Also slowing down separator installations in other states, including Oregon
- Blocking local separator initiatives also

# Typical clinic cost of removing amalgam waste with a separator

[all costs in “2005 dollars”]

|  |               |
|--|---------------|
| Combined separator equipment & installation cost           | \$1,096.67    |
| Lifetime of separator equipment (yrs.)                     | 10            |
| Amortized separator equipment & installation cost per year | \$109.67      |
| Operating, maintenance, recycling cost per year            | \$528         |
| Total equipment and operating cost per year                | \$638         |
| General practice (GP) dental facilities                    | 183480        |
| Total separator costs for all GP facilities per year       | \$116,999,141 |
| Number of amalgam fillings placed per year                 | 60000000      |
| Separator cost per filling placed for all GP facilities    | \$1.95        |

# Summary

- The use of amalgam separators is highly cost effective in preventing releases of mercury
- Cost to remove mercury at a wastewater plant is \$21 million per pound, or \$46,000 per gram (AMSA 2002b) compared w/amalgam separator cost of \$1.95 for average mercury filling removal
- The record clearly shows that voluntary programs are not effective at convincing dentists to install amalgam separators.
- State, local separator initiatives slowed by ADA
- To prevent future pollution and costs, separators should be required and amalgam phased out